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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>07 September 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All   b)☐ Some * c)☐ None of:

　　　　1.☐ Certified copies of the priority documents have been received.

　　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1-6, and 11-14** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Sekine et al. (U.S. Patent 6,101,188), further in view of Naghian et al.

(Pub No. US 2003/0235175 A1).

For **claim 1**, Sekine et al. teach a data forwarding controller (1-Fig. 1, and col. 4,

line 65) for performing data forwarding control via a network, comprising:

a plurality of data input/output ports (Fig. 1);

means for storing (memory, 4-Fig. 1, and col. 4, line 66) a MAC learning table

(41-42n-Fig. 1, and learning table , Abstract, 2nd line from the end) in which a MAC

address (col. 13, line 26, and Fig. 10) of data for forwarding is associated with an output

port (Fig. 1, and col. 1, lines 50-53); and

a control section (1-Fig. 1) for updating (col. 7, line 8) said MAC learning table

(col. 7, lines 10-14),

wherein said control section is configured to

set (col. 8, line 37), for a mobile node, in said MAC learning table, a plurality of

entries (col. 8, line 9) associating different output ports (col. 1, lines 50-53) with a MAC

address of said mobile node, and output (col. 7, line 26) data addressed to said MAC

address of said mobile node received via said network (LAN INTERFACE-Fig. 1), to

said plurality of output ports in parallel (Fig. 1), based on said plurality of entries set in

said MAC learning table (col. 7, lines 15-33), and

said control section is configured to set an entry (update, col. 12, line 25) in said

MAC learning table as an additional entry based on a MAC address of a next access

point (col. 12, lines 25-32 and col. 11, lines 57-60) contained in a handover start

message received from said mobile node (the new MAC address can be from any

source including a handover start message), wherein said additional entry sets a port

(col. 11, line 60) to which said next access point is connected, as an output port (col. 12,

lines 49-52) corresponding to said MAC address of said mobile node, and output said

data addressed to said MAC address of said mobile node received via said network in

parallel (produced dynamically, col. 12, lines 13-15), to said output ports listed in said

plurality of entries as to said MAC address of said mobile node set in said MAC learning

table, wherein said output ports are a plurality of ports (col. 11, line 60. Port Id is only for

plurality of ports) to which a current access point and said next access point of said

mobile node are connected (col. 12, lines 33-38 & 49-52).

However, Sekine et al. fail to specifically teach the mobile node.

Naghian et al. teach the mobile node ([0010], last line).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to

obtain the invention as specified for the mobility applications.

For **claim 2**, Sekine et al. and Naghian et al. teach disclose everything claimed

as applied above (see claim 1). In addition, Sekine et al. teach the data forwarding

controller according to claim 1, wherein said control section is configured to

set (col. 5, line 48) a plurality of entries (col. 7, line 28) respectively setting a port

(col. 7, line 29) to which a current access point of said mobile node is connected and

port(s) (Fig. 1) to which one or more next access points of said mobile node is

connected, as output (col. 7, line 26) ports corresponding to said MAC address of said

mobile node, and output said data addressed to said MAC address of said mobile node

received via said network to said plurality of output ports (Fig. 1) set in said plurality of

entries in parallel (col. 8, line 9).

However, Sekine et al. fail to specifically teach the mobile node and access point.

Naghian et al. teach the mobile node ([0010], last line) and access point ([0024],

line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to

obtain the invention as specified for the mobility applications.

For **claim 3**, Sekine et al. and Naghian et al. teach disclose everything claimed

as applied above (see claim 1). In addition, Sekine et al. teach the data forwarding

controller according to claim 1, wherein said control section is configured to

set (col. 8, line 37) an entry in said MAC learning table (41-42n-Fig. 1, and

learning table , Abstract, 2nd line from the end) as an additional entry (next, col. 8, line

33) based on a MAC address (col. 8, line 36) of a next access point contained in a

handover start message (A1-Fig. 2, B1-Fig. 3, C1-Fig. 6, and interruption, col. 8, lines

45-46) received from said mobile node, wherein said additional entry sets a port to

which said next access point is connected, as an output port corresponding to said MAC

address of said mobile node, and

output (col. 7, line 26) said data addressed to said MAC address of said mobile

node received via said network in parallel (perform flooding, col. 7, line 27), to said

output ports (Fig. 1) listed in said plurality of entries as to said MAC address of said

mobile node set in said MAC learning table, wherein said output ports are a plurality of

ports (Fig. 1) to which a current access point and said next access point of said mobile

node are connected (col. 7, lines 15-33).

However, Sekine et al. fail to specifically teach the mobile node and access point.

Naghian et al. teach the mobile node ([0010], last line) and access point ([0024],

line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to

obtain the invention as specified for the mobility applications.

For **claim 4**, Sekine et al. and Naghian et al. teach disclose everything claimed

as applied above (see claim 1 and 3). In addition, Sekine et al. teach the data

forwarding controller according to claim 3, wherein said control section is configured to

transmit (start-Fig. 2) a handover setting completion message (A2-Fig. 2, and col.

5, line 52) to said mobile node from which said handover start message (A1-Fig. 2, B1-

Fig. 3, C1-Fig. 6, and interruption, col. 8, lines 45-46) is received, on condition that said

setting of said additional entry (next, col. 8, line 33) in said MAC learning table based on said handover start message is completed (col. 5, lines 45-52).

However, Sekine et al. fail to specifically teach the mobile node.

Naghian et al. teach the mobile node ([0010], last line).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to obtain the invention as specified for the mobility applications.

For **claim 5**, Sekine et al. and Naghian et al. teach disclose everything claimed as applied above (see claim 1). In addition, Sekine et al. teach the data forwarding controller according to claim 1, wherein said control section is configured to

delete (col. 13, line 18), based on a MAC address of an old access point contained in a handover end message received from said mobile node, an entry setting a port to which said old access point is connected, as an output port corresponding to said MAC address of said mobile node, from said MAC learning table (col. 8, lines 12-19).

However, Sekine et al. fail to specifically teach the mobile node and access point.

Naghian et al. teach the mobile node ([0010], last line) and access point ([0024], line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to obtain the invention as specified for the mobility applications.

For **claim 6**, Sekine et al. and Naghian et al. teach disclose everything claimed as applied above (see claim 1). In addition, Sekine et al. teach the data forwarding controller according to claim 1, wherein said control section is configured to

receive (A1-Fig. 2) data from access points performing data forward to said mobile node, and set (col. 5, line 48) another data corresponding to output ports for MAC addresses of said access points, based on said data (col. 5, lines 45-49, col. 6, lines 14-17, and Fig. 2).

However, Sekine et al. fail to specifically teach the mobile node and access point.

Naghian et al. teach the mobile node ([0010], last line) and access point ([0024], line 9).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to obtain the invention as specified for the mobility applications.

For **claim 11**, Sekine et al. teach a data communication system (Fig. 1) comprising a communication terminal apparatus of a mobile type which performs data transmission/reception via a network and which changes access points based on data receiving conditions, and a data forwarding controller which performs data forwarding control via said network, wherein said communication terminal apparatus is configured to

acquire a MAC address (col. 1, line 46) of a next access point (next, col. 8, line 33) to which said communication terminal apparatus is scheduled to be connected next (col. 8, lines 32-34), and broadcast a handover start message (A1-Fig. 2, B1-Fig. 3, C1-

Fig. 6, and interruption, col. 8, lines 45-46) containing said MAC address of said

acquired next access point;

said data forwarding controller is configured to

set (col. 8, line 37) an entry in a MAC learning table (41-42n-Fig. 1, and learning

table , Abstract, 2nd line from the end) as an additional entry (next, col. 8, line 33) based

on said MAC address (col. 8, line 36) of said next access point (LAN INTERFACE-Fig.

1) contained in said handover start message (A1-Fig. 2, B1-Fig. 3, C1-Fig. 6, and

interruption, col. 8, lines 45-46) received from said communication terminal apparatus ,

wherein said entry sets a port to which said next access point is connected, as an

output port corresponding to a MAC address of said communication terminal apparatus;

and

output (col. 7, line 26) data addressed to said MAC address of said

communication terminal apparatus received via said network, in parallel (perform

flooding, col. 7, line 27) to output ports (Fig. 1) listed in a plurality of entries as to said

MAC address of said communication terminal apparatus set in said MAC learning table,

wherein said output ports are a plurality of ports (Fig. 1) to which a current access point

and said next access point of said communication terminal apparatus are connected

(col. 7, lines 15-33).

However, Sekine et al. fail to specifically teach the communication terminal

apparatus.

Naghian et al. teach the communication terminal apparatus (MN105-Fig. 1, and

[0024], line 26-27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to obtain the invention as specified for the mobility applications.

For **claim 12**, Sekine et al. and Naghian et al. teach disclose everything claimed as applied above (see claim 1). In addition, Sekine et al. teach the data communication system according to claim 11, wherein said communication terminal apparatus is configured to

perform (process, col. 8, line 32) a handover process on condition that said communication terminal apparatus receives a handover setting completion message (A2-Fig. 2, and col. 5, line 52) from said data forwarding controller as a response to said handover start message (A1-Fig. 2, B1-Fig. 3, C1-Fig. 6, and interruption, col. 8, lines 45-46).

For **claim 13**, Sekine et al. and Naghian et al. teach disclose everything claimed as applied above (see claim 1). In addition, Sekine et al. teach the data communication system according to claim 11, wherein said data forwarding controller is configured to

transmit (start-Fig. 2) a handover setting completion message (A2-Fig. 2, and col. 5, line 52) to said communication terminal apparatus from which said handover start message is received, on condition that said setting of said additional entry (next, col. 8, line 33) in said MAC learning table based on said handover start message is completed (col. 5, lines 45-52).

For **claim 14**, Sekine et al. and Naghian et al. teach disclose everything claimed as applied above (see claim 1 and 3). In addition, Sekine et al. teach the data

communication system according to claim 11, wherein said data forwarding controller is

configured to

      delete (col. 13, line 18), based on a MAC address of an old access point

contained in a handover end message received from said communication terminal

apparatus, an entry setting a port to which said old access point is connected, as an

output port corresponding to said MAC address of said communication terminal

apparatus, from said MAC learning table (col. 8, lines 12-19).

3.   **Claims 7-10** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Naghian et al. (Pub No. US 2003/0235175 A1), further in view of Sekine et al. (U.S.

Patent 6,101,188).

      For **claim 7**, Naghian et al. teach a communication terminal apparatus (105-Fig.

1) of a mobile type which performs (Fig. 1) data transmission/reception via a network

(Fig. 1) and which changes ([0047], line 8) access points ([0024], line 9) based on data

receiving conditions ([0047], lines 7-10), wherein

      said communication terminal apparatus is configured ([0048], line 19) to acquire

a MAC address ([0048], last line) of a next access point ([0044], line 2, and [0048], line

15-end) to which said communication terminal apparatus is scheduled to be connected

next ([0048], line 15-end), and broadcast a handover start message ([0048], line 13)

containing said acquired MAC address of said next access point, and

      perform (make, [0048], line 13) a handover process on condition that said

communication terminal apparatus receives a handover setting completion message

from a data forwarding controller as a response to said handover start message.

However, Naghian et al. fail to specifically teach the handover setting completion message and said handover start message.

Sekine et al. teach the handover setting completion message (A2-Fig. 2, and col. 5, line 52) and said handover start message (A1-Fig. 2, B1-Fig. 3, C1-Fig. 6, and interruption, col. 8, lines 45-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to obtain the invention as specified for more detailed and more efficient control of the communication.

For **claim 8**, Naghian et al. and Sekine et al. teach everything claimed as applied above (see claim 7). In addition, Naghian et al. teach the communication terminal apparatus according to claim 7, wherein said communication terminal apparatus is configured to

perform (exploit, [0039], 9th line from the end) a background scanning process by which all wireless channels are periodically scanned, to acquire and store a source MAC address of a received beacon as said MAC address of said next access point ([0044], line 2, and [0048], line 15-end).

For **claim 9**, Naghian et al. and Sekine et al. teach everything claimed as applied above (see claim 7). In addition, Sekine et al. teach the communication terminal apparatus according to claim 7, wherein said communication terminal apparatus is configured to

re-transmit (returns, col. 5, lines 62-64) said handover start message (A1-Fig. 2,

B1-Fig. 3, C1-Fig. 6, and interruption, col. 8, lines 45-46) for a time period from

transmission of said handover start message to reception of said handover setting

completion message (A2-Fig. 2, and col. 5, line 52).

For **claim 10**, Naghian et al. and Sekine et al. teach everything claimed as

applied above (see claim 7). In addition, Sekine et al. teach the communication

terminal apparatus according to claim 7, wherein said communication terminal

apparatus is configured to

transmit (Fig. 1) to said data forwarding controller (1-Fig. 1) from which said

handover setting completion message (A2-Fig. 2, and col. 5, line 52) is received or

broadcast, a handover end message (B2-Fig. 3) containing a MAC address (col. 5, line

48) of an old access point which said communication terminal apparatus has

disconnected, after said handover process has been performed (col. 5, lines 45-52).

However, Sekine et al. fail to specifically teach the mobile node and access point.

However, Sekine et al. fail to specifically teach the communication terminal

apparatus has disconnected.

Naghian et al. teach the communication terminal apparatus has disconnected

([0050], line 6).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine [Sekine et al.] with [Naghian et al.] to

obtain the invention as specified for the mobility applications.

4.   For **claims** 15-20, they are method claims of claims 1-6, therefore they are

rejected for the same reason above.

5.   For **claims** 21-24, they are method claims of claims 7-10, therefore they are

rejected for the same reason above.

6.   For **claims** 25-28, they are method claims of claims 11-14, therefore they are

rejected for the same reason above.

7.   For **claims** 29, it is a program claim (see Figs. 2-7, program flow chart) of claim

1, therefore it is rejected for the same reason above.

8.   For **claims** 30, it is a program claim (see Figs. 2-7, program flow chart) of claim

7, therefore it is rejected for the same reason above.

Response to Amendment

9.   Applicant's amendment filed September 7, 2007 has been received and

considered. Claims 1, 4, 15, 18, 29, and 30 are amended and Claims 3 and 17 are

canceled.

Response to Arguments

10.   Applicant's arguments filed September 7, 2007 have been fully considered but

they are not persuasive.

11.   Applicant argues that Sekine and Naghian do not teach or suggest all of the

elements of amended Claim 1 (and Claims 2 and 4-6 dependent therefrom).

In response, the Examiner respectfully disagrees.

From col. 11, line 54 to col. 12, line 53, Sekine teach said control section is

configured to set an entry (update, col. 12, line 25) in said MAC learning table as an

additional entry based on a MAC address of a next access point (col. 12, lines 25-32

and col. 11, lines 57-60) contained in a handover start message received from said

mobile node (the new MAC address can be from any source including a handover start

message), wherein said additional entry sets a port (col. 11, line 60) to which said next

access point is connected, as an output port (col. 12, lines 49-52) corresponding to said

MAC address of said mobile node, and output said data addressed to said MAC

address of said mobile node received via said network in parallel (produced

dynamically, col. 12, lines 13-15), to said output ports listed in said plurality of entries as

to said MAC address of said mobile node set in said MAC learning table, wherein said

output ports are a plurality of ports (col. 11, line 60. Port ID is only for plurality of ports)

to which a current access point and said next access point of said mobile node are

connected (col. 12, lines 33-38 & 49-52).

Applicant's arguments regarding other independent claims are identical to

claim1. Therefore they are rejected for the same reason above.

Conclusion

12.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Wanda Z. Russell whose telephone number is (571)

270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WZR

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